AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions of claims in the application.

1. (Currently amended): A magnetic thin film, ~~characterized in that~~ comprising:

~~it comprises~~ a substrate, and $Co_2MGa_{1-x}Al_x$ thin film formed on said substrate,

said $Co_2MGa_{1-x}Al_x$ thin film has $L2_1$ or B2 single phase structure,

M of said thin film consists either of Mo, W, or Cr, or of two or more of Ti, V, Mo, W, Cr, Mn, and Fe, and

an average valence electron concentration Z in said M is $5.5 \leqq Z \leqq 7.5$, and $0 \leqq x \leqq 0.7$.

2. (Currently amended): The magnetic thin film as set forth in claim 1, ~~characterized in that~~ wherein said substrate is heated, and said $Co_2MGa_{1-x}Al_x$ thin film is formed on said heated substrate.

3. (Currently amended): The magnetic thin film as set forth in claim 1, ~~characterized in that~~ wherein said $Co_2MGa_{1-x}Al_x$ thin film formed on the substrate is annealed.

4. (Currently amended): The magnetic thin film as set forth in claim 1, ~~characterized in that~~ wherein said substrate is either one of thermally oxidized Si, glass, MgO single crystal, GaAs single crystal, and Al_2O_3 single crystal.

5. (Currently amended): The magnetic thin film as set forth in claim 1, ~~characterized in that~~ wherein a buffer layer is provided between said substrate and said $Co_2MGa_{1-x}Al_x$ thin film.

6. (Currently amended): The magnetic thin film as set forth in claim 5, ~~characterized in that~~ wherein said buffer layer is made of at least either one of Al, Cu, Cr, Fe, Nb, Ni, Ta, and NiFe.

7. (Currently amended): A tunnel magnetoresistance effect device, ~~characterized in that~~ comprising:

~~in the tunnel magnetoresistance effect device having~~ a plurality of ferromagnetic layers on the substrate, at least one of the ferromagnetic layers is $Co_2MGa_{1-x}Al_x$ (where M consists either of Mo, W, or Cr, or of two or more of Ti, V, Mo, W, Cr, Mn, and Fe, an average valence electron concentration Z in M is $5.5 \leqq Z \leqq 7.5$, and $0 \leqq x \leqq 0.7$) magnetic thin film having either $L2_1$ or B2 single phase structure.

8. (Currently amended): The tunnel magnetoresistance effect device as set forth in claim 7, ~~characterized in that~~ wherein said ferromagnetic layer comprises a fixed layer and a free layer, and said free layer is $Co_2MGa_{1-x}Al_x$ (where M consists either of Mo, W, or Cr, or of two or more of Ti, V, Mo, W, Cr, Mn, and Fe, an average valence electron concentration Z in M is $5.5 \leqq Z \leqq 7.5$, and $0 \leqq x \leqq 0.7$) magnetic thin film having either $L2_1$ or B2 single phase structure.

9. (Currently amended): The tunnel magnetoresistance effect device as set forth in claim 7, ~~characterized in that~~ wherein said substrate is heated, and said $Co_2MGa_{1-x}Al_x$ magnetic thin film is formed on said heated substrate.

10. (Currently amended): The tunnel magnetoresistance effect device as set forth in claim 7, ~~characterized in that~~ wherein said $Co_2MGa_{1-x}Al_x$ magnetic thin film formed on the substrate is annealed.

11. (Currently amended): The tunnel magnetoresistance effect device as set forth in claim 7, ~~characterized in that~~ wherein said substrate is either one of thermally oxidized Si, glass, MgO single crystal, GaAs single crystal, and Al_2O_3 single crystal.

12. (Currently amended): The tunnel magnetoresistance effect device as set forth in claim 7, ~~characterized in that~~ wherein a buffer layer is provided between said substrate and said $Co_2MGa_{1-x}Al_x$ (where M consists either of Mo, W, or Cr, or of two or more of Ti, V, Mo, W, Cr, Mn, and Fe, an average valence electron concentration Z in M is $5.5 \leqq Z \leqq 7.5$, and $0 \leqq x \leqq 0.7$).

13. (Currently amended): The tunnel magnetoresistance effect device as set forth in claim 12, ~~characterized in that~~ wherein said buffer layer is made of at least either one of Al, Cu, Cr, Fe, Nb, Ni, Ta, and NiFe.

14. (Currently amended): A giant magnetoresistance effect device, ~~characterized in that in the giant magnetoresistance effect device having~~ comprising a plurality of ferromagnetic layers on a substrate, at least one of the ferromagnetic layers is $Co_2MGa_{1-x}Al_x$ (where M consists either of Mo, W, or Cr, or of two or more of Ti, V, Mo, W, Cr, Mn, and Fe, an average valence electron concentration Z in M is $5.5 \leqq Z \leqq 7.5$, and $0 \leqq x \leqq 0.7$) magnetic thin film having $L2_1$ or B2 single phase structure, and has the structure in which electric current flows in the direction perpendicular to film surface.

15. (Currently amended): The giant magnetoresistance effect device as set forth in claim 14, ~~characterized in that~~ wherein said ferromagnetic layer comprises a fixed layer and a free layer, and said free layer is $Co_2MGa_{1-x}Al_x$ (where M consists either of Mo, W, or Cr, or of two or more of Ti, V, Mo, W, Cr, Mn, and Fe, an average valence electron concentration Z in M is $5.5 \leqq Z \leqq 7.5$, and $0 \leqq x \leqq 0.7$) magnetic thin film having either one of $L2_1$, B2, and A2 structures.

16. (Currently amended): The giant magnetoresistance effect device as set forth in claim 14, ~~characterized in that~~ wherein said substrate is heated, and said $Co_2MGa_{1-x}Al_x$ magnetic thin film is formed on said heated substrate.

17. (Currently amended): The giant magnetoresistance effect device as set forth in claim 14, ~~characterized in that~~ wherein said $Co_2MGa_{1-x}Al_x$ magnetic thin film formed on the substrate is annealed.

18. (Currently amended): The giant magnetoresistance effect device as set forth in claim 14, ~~characterized in that~~ wherein said substrate is either one of thermally oxidized Si, glass, MgO single crystal, GaAs single crystal, and Al_2O_3 single crystal.

19. (Currently amended): The giant magnetoresistance effect device as set forth in claim 14, ~~characterized in that~~ wherein a buffer layer is provided between said substrate and said $Co_2MGa_{1-x}Al_x$ (where M consists either of Mo, W, or Cr, or of two or more of Ti, V, Mo, W, Cr, Mn, and Fe, an average valence electron concentration Z in M is $5.5 \leqq Z \leqq 7.5$, and $0 \leqq x \leqq 0.7$) thin film.

20. (Currently amended): The giant magnetoresistance effect device as set forth in claim 19, ~~characterized in that~~ wherein said buffer layer is made of at least either one of Al, Cu, Cr, Fe, Nb, Ni, Ta, and NiFe.

21. (Currently amended): A magnetic device, ~~characterized in that~~ comprising a $Co_2MGa_{1-x}Al_x$ (where M consists either of Mo, W, or Cr, or of two or more of Ti, V, Mo, W, Cr, Mn, and Fe, an average valence electron concentration Z in M is $5.5 \leqq Z \leqq 7.5$, and $0 \leqq x \leqq 0.7$) magnetic thin film having $L2_1$ or B2 single phase structure [[is]] formed on a substrate.

22. (Currently amended): The magnetic device as set forth in claim 21, ~~characterized in that~~ wherein it uses a tunnel magnetoresistance effect device or a giant magnetoresistance effect device in which a free layer is said $Co_2MGa_{1-x}Al_x$ (where M consists either of Mo, W, or Cr, or of two or more of Ti, V, Mo, W, Cr, Mn, and Fe, an average valence electron concentration Z in M is $5.5 \leqq Z \leqq 7.5$, and $0 \leqq x \leqq 0.7$) magnetic thin film.

23. (Currently amended): The magnetic device as set forth in claim 21, ~~characterized in that~~ wherein it uses a tunnel magnetoresistance effect device or a giant magnetoresistance effect device fabricated by heating said substrate, and from said $Co_2MGa_{1-x}Al_x$ magnetic thin film formed

on said heated substrate.

24. (Currently amendedl): The magnetic device as set forth in claim 21, ~~characterized in that~~ wherein it uses a tunnel magnetoresistance effect device or a giant magnetoresistance effect device fabricated by annealed said $Co_2MGa_{1-x}Al_x$ magnetic thin film formed on the substrate.

25. (Currently amended): The magnetic device as set forth in claim 21, ~~characterized in that~~ wherein it uses a tunnel magnetoresistance effect device or a giant magnetoresistance effect device in which said substrate is either one of thermally oxidized Si, glass, MgO single crystal, GaAs single crystal, and Al_2O_3 single crystal.

26. (Currently amended): The magnetic device as set forth in claim 21, ~~characterized in that~~ wherein it uses a tunnel magnetoresistance effect device or a giant magnetoresistance effect device in which a buffer layer is provided between said substrate and said $Co_2MGa_{1-x}Al_x$ (where M consists either of Mo, W, or Cr, or of two or more of Ti, V, Mo, W, Cr, Mn, and Fe, an average valence electron concentration Z in M is $5.5 \leqq Z \leqq 7.5$, and $0 \leqq x \leqq 0.7$) thin film.

27. (Currently amended): The magnetic device as set forth in claim 26, ~~characterized in that~~ wherein it uses a tunnel magnetoresistance effect device or a giant magnetoresistance effect device in which said buffer layer is made of at least either one of Al, Cu, Cr, Fe, Nb, Ni, Ta, and NiFe.

28. (Currently amended): A magnetic recording device, ~~characterized in that~~ wherein it uses a magnetic head in which $Co_2MGa_{1-x}Al_x$ (where M consists either of Mo, W, or Cr, or of two or more of Ti, V, Mo, W, Cr, Mn, and Fe, an average valence electron concentration Z in M is $5.5 \leqq Z \leqq 7.5$, and $0 \leqq x \leqq 0.7$) magnetic thin film having $L2_1$ or B2 single phase structure is formed on a substrate.

29. (Currently amended): The magnetic recording device as set forth in claim 28, ~~characterized in that~~ wherein it uses a tunnel magnetoresistance effect device or a giant magnetoresistance effect device in its magnetic head in which the free layer is said $Co_2MGa_{1-x}Al_x$ (where M consists either of Mo, W, or Cr, or of two or more of Ti, V, Mo, W, Cr, Mn, and Fe, an average valence electron concentration Z in M is $5.5 \leqq Z \leqq 7.5$, and $0 \leqq x \leqq 0.7$) magnetic thin film.

30. (Currently amended): The magnetic recording device as set forth in claim 28, ~~characterized in that~~ wherein it uses in its magnetic head a tunnel magnetoresistance effect device or a giant magnetoresistance effect device fabricated by heating said substrate, and from said $Co_2MGa_{1-x}Al_x$ magnetic thin film formed on said heated substrate.

31. (Currently amended): The magnetic recording device as set forth in claim 28, ~~characterized in that~~ wherein it uses in its magnetic head a tunnel magnetoresistance effect device or a giant magnetoresistance effect device fabricated by annealed said $Co_2MGa_{1-x}Al_x$ magnetic thin film formed on the substrate.

32. (Currently amended): The magnetic recording device as set forth in claim 28, ~~characterized in that~~ wherein it uses a tunnel magnetoresistance effect device or a giant magnetoresistance effect device in its magnetic head in which said substrate is either one of thermally oxidized Si, glass, MgO single crystal, GaAs single crystal, and Al_2O_3 single crystal.

33. (Currently amended): The magnetic recording device as set forth in claim 28, ~~characterized in that~~ wherein it uses a tunnel magnetoresistance effect device or a giant magnetoresistance effect device in its magnetic head in which a buffer layer is provided between said substrate and said $Co_2MGa_{1-x}Al_x$ (where M consists either of Mo, W, or Cr, or of two or more

of Ti, V, Mo, W, Cr, Mn, and Fe, an average valence electron concentration Z in M is $5.5 \leqq Z \leqq 7.5$, and $0 \leqq x \leqq 0.7$) thin film.

34. (Currently amended): The magnetic recording device as set forth in claim 33, ~~characterized in that~~ wherein it uses a tunnel magnetoresistance effect device or a giant magnetoresistance effect device in its magnetic head in which said buffer layer is made of at least either one of Al, Cu, Cr, Fe, Nb, Ni, Ta, and NiFe.